

Washington Update - Outlook for Ethanol

Emerging Issues Forum

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Energy Policy Adrift

Washington-- New Levels of Dysfunction, Discord, and Disagreement

Energy Policy in General and Ethanol/Renewables Specifically

IEA – Paris based Think Tank’s five year review of Energy Policy around the world.....concluded U.S. does not have one. Why?
“Lack of Clarity for Energy Producers, caused in part by government gridlock....and Congressional battles also prevent clarity and hinder the development of renewables.”

Renewable energy tax credits (wind, solar, etc.) unpredictable, often retroactive, useless in financing

Recent public polls suggesting climate/energy low priorities

Energy Policy, cont.

Nuclear, Petroleum, Natural Gas, Renewables all trying to understand where they stand.....

The one thing we *have* decided on – *twice*-- is that we need more renewable transportation fuels via an RFS

So naturally, that becomes one of the most contentious issues in decades, rivals ANWR, Nuclear waste, fracking, etc.

RFS itself not without blame-- ILUC, off ramps, waiver credits, feedstock requirements and restrictions, inflexible timetables, unrealistic volumes..... a recipe for problems.

Selective Amnesia in Congress....Much Like the Tax Exemption

Challenge is at both Legislative & Regulatory Levels, with a heavy dose of negative perception. DC is Ground Zero.

How Did We Get Here?

We Have Lost the Underdog Advantage—read David Morrey

How is it that Big Oil is the poor, downtrodden party?

Follow the Money. Millions upon Millions Being Spent

- Media. Pseudo Interest Groups. Votes.

No End to People and Groups We Have Offended

- Many not even Real - - made up w/catchy names.
- Anti Hunger? Anti Poverty? Holding hands w/ Oil?

What happened to pictures of burning oil fields, oil covered beaches, black concrete walls in urban cities, soldiers trudging across the desert, reminders of \$4 gasoline, the gold toilet seats of OPEC, the boom and bust cycle of US Oil

Big Oil has defined the debate:

- Energy Security no longer an Issue
- Ethanol is made from food
- It Hurts your engines, robs mileage, etc. etc.
- It hurts the environment
- It is subsidized
- we have no room for it because we can only use 10%
- If you make us use more than 10% you will pay for it

The “Ethanol Mandate” Problem

Good News! No More Requirement to Blend Ethanol !!

There never was---much less corn ethanol. But say it enough and

With that assumption comes all the associated issues

Food vs. fuel, land use, food vs. fuel, pesticides, food vs. fuel, net energy, food vs. fuel.....

Reality is that a range of fuels & feedstocks are available

Why punish corn because of its efficiency in meeting the RFS?

Congressional Action

That's Exactly What Some Members Propose: Eliminate the One Part of the RFS that Works.

Feinstein—cites corn/food price, hurts engines, raises gasoline costs, negative net energy.

- Despite failing the Pinocchio test, she continues

- Statements not only False, But Have a long Shelf life

Feinstein Has long History of Anti Ethanol, has enlisted other members who also don't check their facts

Goes Back to California, RFG & Chevron, she led the fight to take away the tax exemption getting a huge majority vote

Congress, Cont.

McCain (R-AZ) ,Toomey (R-PA), Cardin (D-MD), Flake- (R-AZ)-

House-- bigger problem-- Energy & Commerce

Several Bills Floating Around to Mess w/ RFS

Goodlatte (R-VA) – 2nd On Ag, Reform, Now Repeal

Budget/Power of the Purse

- Block Funding for Pumps & Exports

Congress, cont.

That Said, would be a challenge to Get Past the Senate--
Jurisdiction is EPW, now Chaired By Inhofe (R-OK).....*"would do it in a heartbeat...but the votes not there."*

24 of 34 Senators up in 2016 are R's

Those R's represent 69% of US Corn Production

67% of Ethanol Production

R Leadership unlikely to pick that fight

The Iowa Litmus Test

RFS Showing up in Early Prez Politics

Iowa – The Branstadts Effort

Ag Summit

Media Ridiculed Candidates for Pandering to Ethanol, but why not?

People Like Senator Cruz showed alarming lack of understanding, citing subsidies, free market

Others call for a phase out....

“Government Shouldn't Pick Winners and Losers”

of course the should-- ask Bob Kerrey

These efforts force some discussion, make these officials think.

Teaching Moment Re: *requirement to blend corn ethanol....*

Not all Bad: Graham (R-SC)-- “every barrel of ethanol is a barrel of oil we don't import from people that hate our guts!”

Congress, Cont.

Bottom Line as it Relates to Legislation: Pray that Congress does what it does best: Nothing.

The Fly Ins and truth squads help w/ so many new members

Hard to imagine opening the RFS up and coming out better.

Recent Advanced Biofuel Association – “RFS Not working for everyone.”

ABFA Strong Oil Ties Does Not Represent a Split

Unfortunately they are unable to produce economical fuel

Orchestrated Announcement w/API

Their version of Reform is Subsidy

Negative Press/Negative Interest Groups

- People who don't Like us
 - People who eat a lot
 - People who think we keep them from eating
 - People who Eat beef
 - People who Eat chicken
 - People who Eat pork
 - People who Eat turkey
 - People who go to fast food restaurants
 - People who drive boats
 - People who ride motorcycles
 - People who drive snowmobiles
 - People who cut down trees with chainsaws
 - People who want to save trees
 - People who drive antique cars
 - Jay Leno

People who cut their grass

People who trim their grass

People who run a blower to blow away the grass

People who pay taxes

People who don't pay taxes

Oil companies

People Who Like Us

My mom.

Your mom.

So Where Do We Go From Here?

- RFS & RVOs Are a Base. A Bridge, not a Destination
- Regardless of What EPA Does, We must create new markets, new demand, and new value.
- Cars and Pumps are critical to any future growth-- our Objective at CFDC is to create demand beyond RFS.
- Depending on Interpretation of Off Ramp Language, future RVOs may be moot

(7) Waivers.

(A) In general. The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, **may waive the requirements** of paragraph (2) in whole or in part on petition by one or more States, by any person subject to the requirements of this subsection, **or by the Administrator on his own motion by reducing the national quantity of renewable fuel required under paragraph (2)--**

(i) based on a determination by the Administrator, after public notice and opportunity for comment, that implementation of the requirement would **severely harm the economy or environment** of a State, a region, or the United States; or

(ii) based on a determination by the Administrator, after public notice and opportunity for comment, **that there is an inadequate domestic supply.**

Waivers, cont.

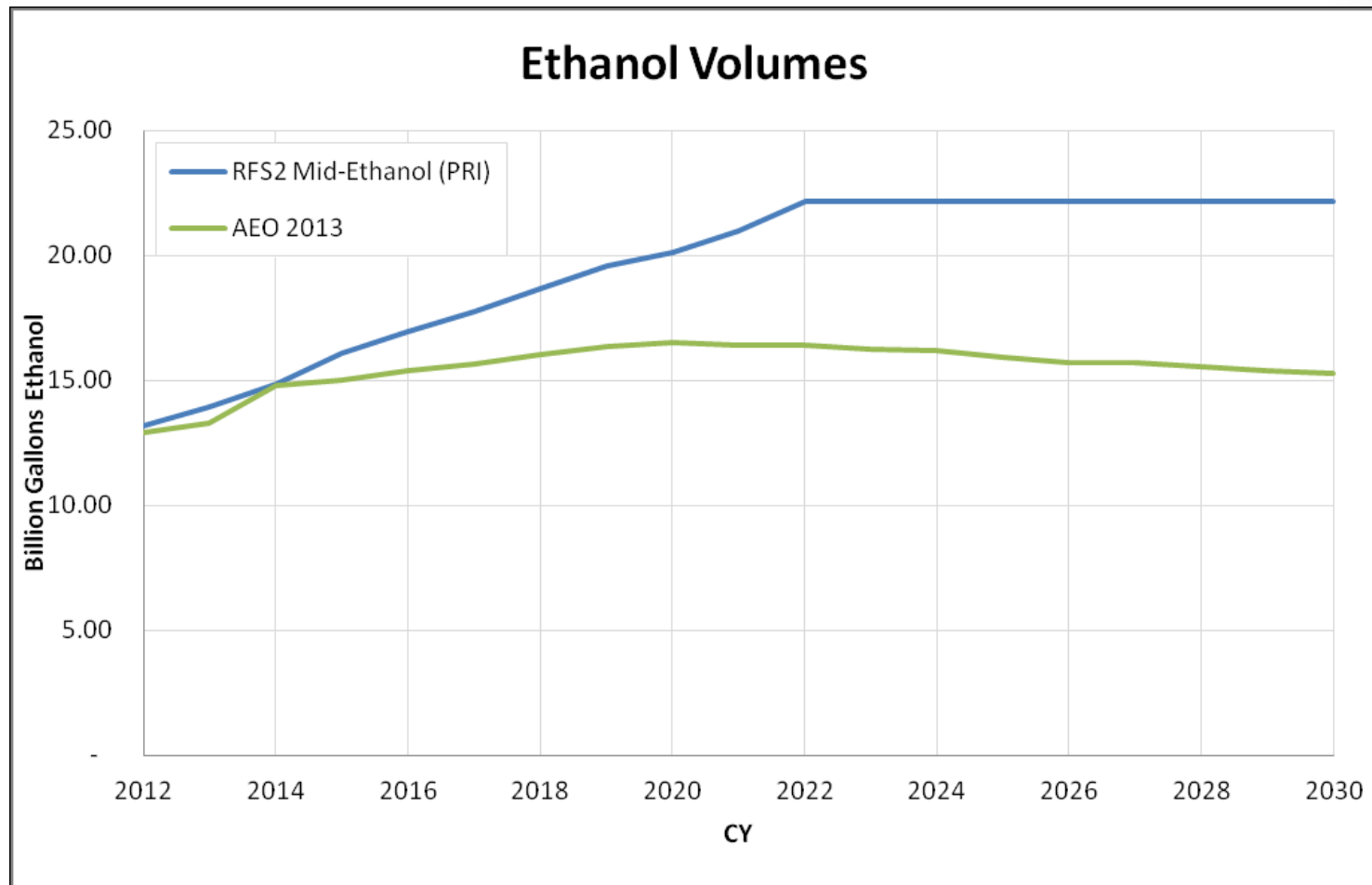
(F) Modification of applicable volumes. For any of the tables in paragraph (2)(B), **if the Administrator waives**

(i) at least **20 percent** of the applicable volume requirement set forth **in any** such table for 2 consecutive years; or

(ii) at least **50 percent** of such volume requirement for a **single year,**

the Administrator shall promulgate a rule (within 1 year after issuing such waiver) that modifies the applicable volumes set forth in the table concerned **for all years following the final year to which the waiver applies, except that no such modification in applicable volumes shall be made for any year before 2016.** In promulgating such a rule, the Administrator shall comply with the processes, criteria, and standards set forth in paragraph (2)(B)(ii).

EPA Volume Projections Used in FFV Calculations and Possible Future, Permanent RFS



Options to Tear Down That Wall....

- E15
 - Seasonal RVP Restrictions & MOVES Model
 - Significant Opposition by Small Engines/Boats./Cycles,etc
- Flex Fuel vehicles

Incentives went from Bad to Worse

- Mid Level Blends in Dedicated or Optimized Vehicles
 - Auto Industry Needs Octane but sees what we see
 - Evs Essentially Mandated
 - Looking for a distribution plan & Strategy
- Ethanol Used In Conventional Vehicles/Legacy Fleet

Bring Me Solutions.....

- E15— No Rvp Increase when increasing vol.> E10
 - Brazilians, Auto Industry, even EPA Agree
 - Key is Splash Blending Ethanol on Finished E10
 - Makes for an auto-ethanol alliance
- FlexFuel Vehicles—
 - Need to Increase CO2 Credit (field to wheels)
 - Need to Increase Usage Assumption and Real time
 - Broad Industry Support
- Mid Level Blends
 - EPAs E30 Certification Procedure—EPA Court Challenge

RVP Waiver

An extensive set of vapor pressure data for ethanol blends with market gasolines and blendstocks of varying volatility (ASTM D4814 Class AA to Class E) [12] was reported in the study by API [4]. RVPs for blends of ethanol in three representative gasoline blendstocks spanning a wide range of volatility classes are shown in Figure 1.

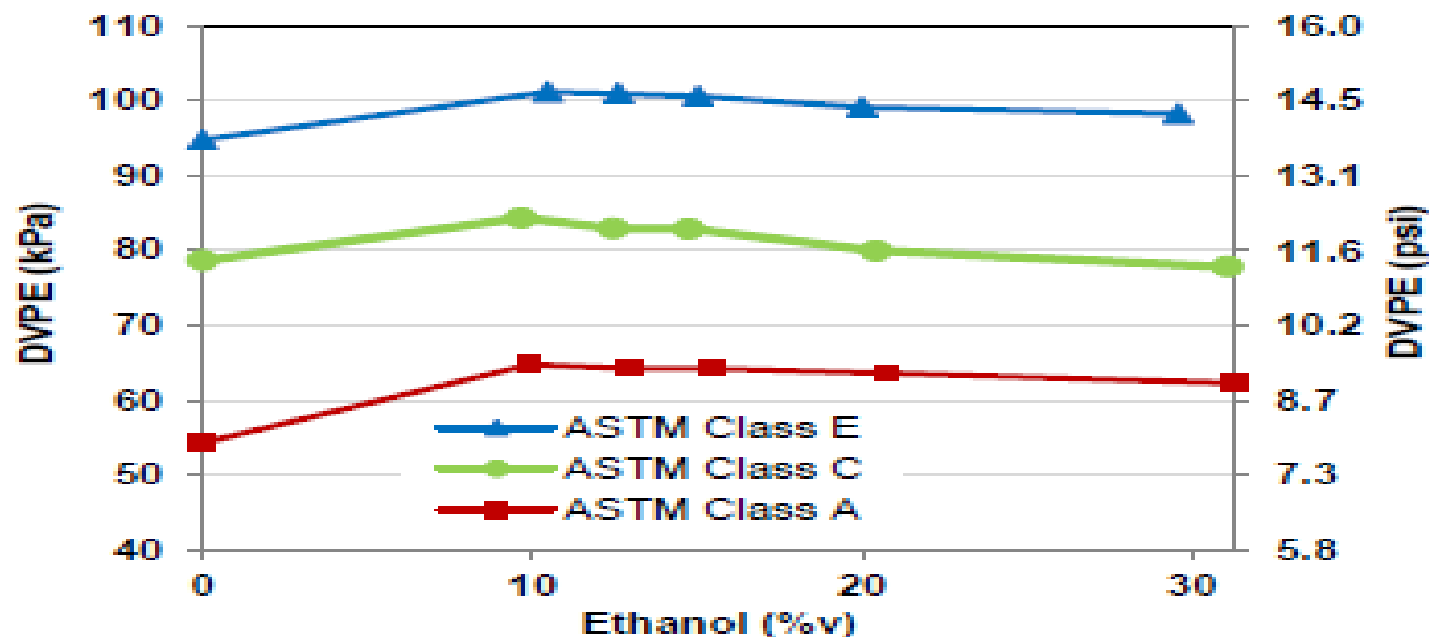


Figure 1 – Reid vapor pressures (Dry Vapor Pressure Equivalent) for ethanol-gasoline blends of varying volatility [4]. The ASTM volatility classes shown are for the base gasoline without ethanol (E0).

Pathway Forward

- Short term: Poke through the blend wall with E15, E85
 - RVP Waiver, Minimum Octane
- Mid Term: Develop Significant and *sustainable* FlexFuel Market—which means cars, pumps, and consumers.
- Long Term: Move towards greater efficiency blends, e.g. optimized E30

Conclusion & Recommendations

- RFS Remains Important Baseline. Assures Market and Drives Investment and Technology. Law must be upheld.
- Even fully meeting statutory targets=flat demand
- Must Create Demand beyond RFS and Government Programs
- Carbon/Climate, Health, Octane, all value propositions for ethanol—especially aromatic control via clean octane as in the original Daschle provision
- Likely Sustained period of Low Oil Prices add to the challenge
- Continue to tell *our* story, not *their* version!

Thank you!

For more information log on to

www.cleanfuelsdc.org
www.ethanolacrossamerica.net